# Getting To Half

2030 CLIMATE CHANGE COMMITMENTS Governor's Office Five Pillars Symposium Rethinking Transportation in California



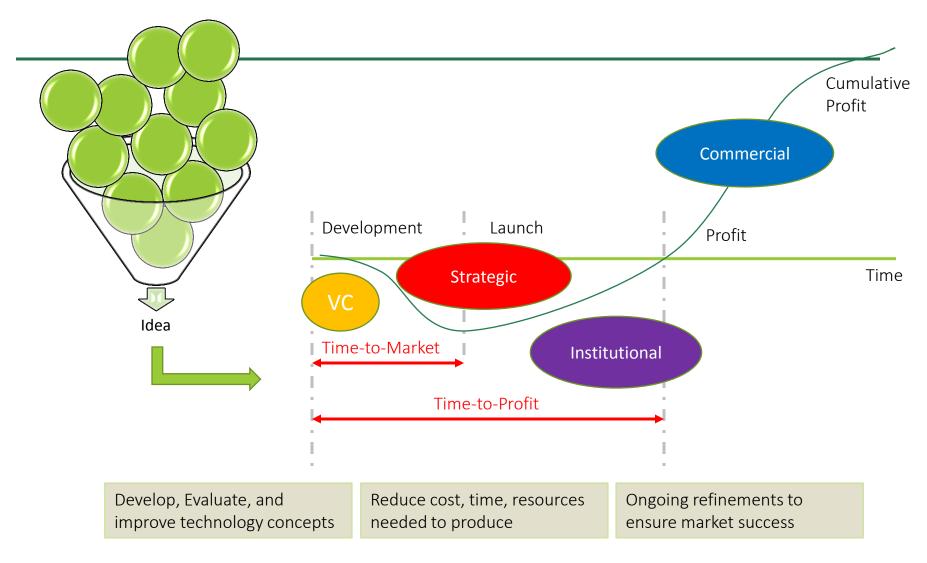
California Air Resources Board July 8, 2015 Christopher J. Hessler, Partner, AJW, Inc.

## Who Is an "Investor"?

#### **Institutional Investor VC Investor Primary Financial Expertise** Visionary High – Yield Targets High Technology & Market Risk Tolerance Low Technology Risk Tolerance Minimal Market Expertise Moderate Market Risk Tolerance "Bench Scale" "Pilot Scale" "Demonstration Scale" "Commercial Scale" Laboratory **Process Development Production Development Commercial Production** Development 0-100 gallons/day 50–1,500 gallons/day 1,000 - 5,000 gallons/day 10,000 - 100,000 gallons/day **Technology Maturation Strategic Investor** Core Competence in target market **Commercial Investor** Corporate IRR Targets must be met **Growth Financing** Moderate Technology Risk Tolerance Low Technology and Market Risk Tolerance Low Market Risk Tolerance



# The Technology Innovation Process





# **Guiding Principles**

- **Policy Stability** Nothing curbs private sector investment faster than fear of regulatory risk. (Enhance, but do not replace, current policies.)
- Clear Price Signal Markets respond best when they have confidence around pricing, which often requires price caps. (Price caps can function as a sensible and stabilizing brake on market-forcing regulations.)
- Technology Neutrality Let the market choose the least cost/most acceptable solutions – despite myriad temptations to favor specific technology outcomes. (Met the policy goals but didn't get enough of desired technologies? <u>Then</u>, <u>raise the goals!)</u>
- Zero-Risk (to Government) Funding Approach Funding programs should not shift technology risk from the private sector to the government. Government incentives should pay out when technologies deliver results not before. (But, the payout must be both <u>certain and sufficient</u> to motivate private sector.)



### The Road To 50%

#### 1. First – Do no harm

- Maintain stable policy framework stay the course with LCFS & vehicle standards
- Clear, steady policy increases investment, accelerates development and deployment of new technologies

# 2. Then, Maximize Market Response with Complementary Policy

- Re-commit to Technology Neutrality Government funding should be technology neutral and completely risk free to the government
- Strengthen LCFS When Appropriate Market capacity for rapid change will be more clear in time but strong cost containment mechanism will continue to be crucial if standard is tightened in the future
- Integrate Vehicle & Fuel Policy Encourage combined vehicle/fuel investment approaches to be used for compliance



#### Thank You

Christopher Hessler <u>chessler@ajw-inc.com</u> @AjwHessler 202-296-8086

980 9<sup>th</sup> Street 16<sup>th</sup> Floor Sacramento, CA 95814 2200 Wilson Boulevard Suite #310 Arlington, VA 22201

